

CIRCULATION ELEMENT  
OF THE GENERAL PLAN

CITY OF GRIDLEY

Summary Document

prepared for  
The City of Gridley

by

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# GRIDLEY CIRCULATION ELEMENT

## Summary Document

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## GRIDLEY CIRCULATION ELEMENT

### SUMMARY OF CIRCULATION ELEMENT SUPPORT DOCUMENT

The Circulation Element of Gridley's General Plan establishes general goals and policies, emphasizing cost efficiency, convenience, safety, and efficient movement of goods and people.

#### POLICY HIGHLIGHTS

Through its Circulation Element policies, the City of Gridley:

1. Supports use of government funding sources for transportation improvements benefitting the general public.
2. Requires new development to pay cost of necessary improvements.
3. Calls for limited access along roads in commercial strip development.
4. Recommends two access routes for all major new developments, with both routes preferably avoiding residential neighborhoods.
5. Encourages development of bike lanes throughout town, and provision of bike racks in the downtown area.
6. States that a parking inventory will be conducted.

In response to concerns regarding pedestrian safety, Gridley adopts the following additional policies:

7. Sidewalks will be encouraged along all street frontages throughout the city.
8. Throughout the city, sidewalks will be required in connection with new construction or development projects, with owner or applicant to pay full costs, as provided for in Chapter 12.04 of the Gridley Municipal Code.
9. A program to build sidewalks along pedestrian routes as shown on Figure 5 will be implemented on a shared cost basis. Along the designated pedestrian walkways, the program will require mandatory sidewalk construction where no sidewalks presently exist, and mandatory repair or reconstruction where existing sidewalks are deteriorated (broken, sunken below grade).



10. Owners of property not along designated pedestrian walkways may request city assistance in new sidewalk construction. The city will perform the construction and share costs with the property owner.

#### POTENTIAL CONGESTION AREAS

The Circulation Element describes the existing road system and analyzes it with a computer model, to identify potential congestion areas. Conclusions are:

1. At present, there is no shortage of available parking in the downtown business area. With future growth and revitalization of downtown, more parking may be needed.

2. Gridley's traffic is flowing freely, at present. The only intersections with slight traffic delays are:

- (a) intersection of Sycamore and Virginia Streets
- (b) intersection of Sycamore and Vermont Streets
- (c) Magnolia Street
- (d) Washington Street.

These areas would experience congestion due to insufficient numbers of north-south collectors.

#### PROPOSED FUTURE CIRCULATION IMPROVEMENTS

##### Background and Introduction

To provide for all types of anticipated future circulation needs, the road system must have an adequate distribution of different road types, each serving a different function. The basic street system can be divided into the following four categories:

(1) **Arterials** - Arterials are the largest type of street found in Gridley. Arterials can provide for through traffic movement between cities and through the city with limited direct access to abutting property. Sycamore and Spruce Streets are examples of arterials.

(2) **Collector System** - Collectors provide for through traffic movement between areas and across the city with access to abutting property. Since the most important function of the collector system is to move large volumes of vehicles from one part of the city to another, they should be designated to connect areas with high volumes of traffic and important rural highways entering the city.



A properly designed and developed collector system will help define residential neighborhoods, industrial and commercial areas. Where possible, they should skirt residential neighborhoods. For minor collector and local streets to serve their intended purpose, major collector streets should not be more than one mile apart. The width standard for the system is 84 feet right-of-way for four lanes, parking and a median strip for major collectors which carry unusually high traffic loads. Generally speaking, a four-lane major collector may carry up to 2,400 vehicles per hour during the peak hour, or 600 vehicles per hour per lane. A two-lane minor collector, with a 60-foot right-of-way, can carry up to 8,000 vehicles per day. Due to its limited projected population, Gridley's planned collector streets are all minor (two-lane) collectors.

(3) **Local Street System** - Local streets provide direct access to abutting land, and provide for local traffic movement. Through traffic movement should be discouraged on local streets. Width standards for the local street system are 40 feet with parking, within a right-of-way of 60 feet. A number of existing local streets within the city have right-of-way widths of less than 60 feet. It may not be feasible to improve these streets to right-of-way widths of 60 feet. As development occurs on substandard streets, various dedication of right-of-way widths and/or elimination of onstreet parking may be necessary.

Figure 5 depicts Gridley's existing (1983) circulation system, with proposed road extensions superimposed. These road extensions are recommended for purposes of

- a) better accommodating existing local traffic circulation;
- b) accommodating local traffic generated by future growth occurring on land contiguous to existing development;
- c) improving circulation for local and through traffic in outlying areas presently in agricultural use; d) providing a network of major roads which will give definition to future residential neighborhoods and commercial areas.

Provision for proper circulation in Gridley also includes ensuring pedestrian safety along the entire length of those routes most frequently taken by both pedestrians and vehicle traffic. Figure 5 includes the designated pedestrian walkways to be the targets of a mandatory sidewalk construction program (refer to Policies 7 through 10).



## CIRCULATION ISSUES AND PROPOSED MEASURES

The following discussion connects each proposed improvement on Figure 5 with a local issue specific to Gridley's circulation planning.

**Issue:** East-West Truck Route passing elementary schools and Post Office on Sycamore Street causes inconvenience, noise impacts and a threat to pedestrian safety.

**Measure:** Convert West Biggs-Gridley Road/Sycamore Street corner to a rounded, more gradual curve to ease turns as trucks move between Colusa Highway and Spruce Street, making Spruce the truck route rather than Sycamore. (See discussion under "Truck Route Study".)

**Issue:** Lack of collector roads in outlying agricultural areas to provide for future major circulation framework.

Criteria for collector network:

- a) Locate a major road (collector) at least once every mile in both directions.
  - b) Use existing roads where possible, (e.g., Little).
  - c) Where no road exists, extend an existing road (e.g., Block, Ord Ranch Road) in the best location for proper collector frequency.
- Measures:**
- (1) Extend Block Road north, and curve east to meet West Biggs-Gridley Road.
  - (2) Extend Ord Ranch Road, going south of Drainage Lateral E-7 and then west along section line, to meet the Block Road extension.
  - (3) Upgrade Little Avenue, and Block Road north of the Little intersection, to minor collector standards.
  - (4) Extend Washington Street northwest (parallel) to the Southern Pacific railroad for about one mile.
  - (5) Extend Vermont Street north 1500 feet, to meet the extension of Ord Ranch Road.
  - (6) Extend Little Avenue east to meet Highway 99.
  - (7) Extend Washington Street southeast to meet the extension of Little Avenue.

**Issue:** Future Gridley area growth could result in traffic congestion unless preventive measures are taken.

**Measures:** (1) To avoid congestion on Highway 99 through town, encourage construction of the Caltrans-suggested freeway bypass route, with Gridley access, about 1/2 mile east of the present route. A frontage road would be located along the west side of the bypass, from East Gridley Road to Ord Ranch Road.

(2) In connection with environmental review for new developments, analyze which intersections will be impacted, the degree to which impaction will occur, and what improvements are necessary to avoid either direct or cumulative impacts.

(3) Establish appropriate funding mechanisms to insure developer pays for improvements made necessary as a result of his development.

**Issue:** Some local streets do not connect with the overall circulation pattern.

**Measures:** (1) Extend Bridgeford Avenue southwest to meet Gridley-Biggs Highway, and extend Idaho and Nevada streets north to meet the Bridgeford Avenue extension.

(2) Extend East Spruce Street east to the City Limits.

(3) Connect Fairview Drive between East Spruce and south of East Hazel.

(4) Extend Spruce Street from West Biggs-Gridley Road west to Kofford Avenue.

(5) Extend Randolph Avenue north to meet the extension of Spruce Street.

(6) Extend Kofford Road north, and Macedo Road west, to meet in a right angle.

(7) Extend Bonnell Avenue south from Archer Avenue to meet Nielson Avenue.

(8) Extend Idaho and Georgia Streets south to meet Little Avenue.

(9) Connect West Liberty Road with the extension of Little Avenue.

(10) Extend Bayberry Way west to meet Lewis Oak Road.



- (11) Extend Laurel Street west to meet Lewis Oak Road.

**Issue:**

Some streets do not have sidewalks along the entire lengths of heavily travelled pedestrian routes, exposing school children, shoppers and senior citizens to traffic hazards. In some cases, landscaping and temporary structures have been placed in the right-of-way, forcing pedestrians to walk in the street.

**Measures:**

(1) Designate pedestrian walkways along streets having heavy pedestrian use, especially those also having heavy vehicle traffic. These walkways should cover the most frequently used pedestrian routes from origin to destination. (Walkways indicated on Fig. 5.)

Pedestrian walkways should be designated along the following roads (on both sides of street, unless otherwise noted.):

**East-West:**

1. Spruce Street from West Biggs-Gridley Road to the end of East Spruce. Crosswalks at all north-south street crossings. (heavily travelled by both vehicles and pedestrian, including High School students along East Spruce)
2. Hazel Street from Vermont to the end of East Hazel. (pedestrian route to High School)
3. Sycamore Street from West Biggs-Gridley Road to Highway 99. Crosswalks at all N-S street crossings. (heavily travelled by both vehicles and pedestrians, particularly shoppers and school children. Sidewalks especially needed between Kentucky Street and the Southern Pacific railroad by children walking to Wilson School.)
4. Magnolia Street (and Terrace) from Idaho Street to Highway 99. Crosswalks at most N-S street crossings, except at south side of Vermont and Washington. Walkway extends north around Magnolia Terrace and south around Magnolia Street as shown on Figure 5. (heavily travelled by both vehicles and pedestrians, especially where heavy trucks use Magnolia between Kentucky Street and Highway 99)
5. East Gridley Road from Highway 99 to Bonnell Avenue. (often heavily travelled by both vehicles and pedestrians during functions held at Fairgrounds)
6. Cedar Street between Vermont and Ohio.



#### North-South:

7. West Biggs-Gridley Road from Sycamore to Spruce east side of road only.

8. Oregon Street from Locust to Spruce.

9. Vermont from south of Ash to end (at north City Limits); Ohio from Sycamore to Spruce; Kentucky from Magnolia to Spruce; crosswalks at Hazel for all of the above walkways. (downtown shopping area streets; main pedestrian routes to downtown from residential areas)

10. Haskell from south end of Spruce. Crosswalks at Hazel. (main pedestrian route to City park)

11. Highway 99 from south City Limits to Spruce. Crosswalks at Archer, East Gridley Road and Hazel Street. (heavily travelled by both vehicles and pedestrians, particularly shoppers, senior citizens from The Oaks apartments, and students walking to and from the High School on East Spruce)

(2) Crosswalks should be marked where designated walkways cross an intersection as indicated on Figure 5.

(3) Investigate the cost of a pedestrian over-crossing bridge near the Cherry Street and Highway 99 intersection to facilitate safe access to the downtown area for senior citizens living in The Oaks apartments. Compare this cost to that of signalizing the Cherry-Highway 99 intersection and choose the more-cost-effective measure. Coordinate with Caltrans regarding this measure.

#### IDENTIFICATION OF REMAINING PROBLEMS

1. Some existing and proposed collectors have inconsistent right-of-way widths, so that when they need to be expanded to full width according to standards for collectors (60-foot ROW or greater), some properties will have to be acquired.

Example: Little Avenue.

2. Some residential areas have developed in solid blocks, bordering canals, leaving no room to put streets through. Development occurring on the other side of these blocks will have to go around them to get access to the city street system.

Example: South side of Little Avenue, between  
Randolph Avenue and Oregon Street.

3. Optimal routing of east-west through traffic is dependent on construction of expensive new road extensions, for which funding sources must be found. While these should be built as soon as possible, limited funding availability may delay construction of needed improvements.

4. The following local streets have right-of-way widths of less than 60 feet:

<u>STREET</u>	<u>RIGHT-OF-WIDTH</u>
Archer Avenue	40 feet
Jay Drive	56 feet
Laurel Street	50 feet (Idaho to Randolph)
Little Avenue	40 feet
Locust Street	50 feet (west of Idaho)
Magnolia Street	18 feet (west of Idaho)
Norman Street	40 feet
Obermeyer Avenue	40 feet
Orange Avenue	20 feet
Oregon Street	50 feet (south of Locust)
Sierra Vista	50 feet
Vermont Street	50 feet (south of Locust)
Vista del Rio	50 feet

In addition to these, several additional streets have curb-to-curb widths of less than 40 feet, including the following streets:

Jackson, Sage, Fairview and Cherry  
Peach from West Biggs-Gridley Road to Oregon  
Idaho from Sycamore to Peach

If new development occurs adjacent to these streets, conditions of approval attached to any discretionary decision by the city should be reviewed on a street-by-street basis. Traffic and pedestrian safety, existing setbacks and potential buildout should be considered during review of proposed projects.

#### TRUCK ROUTE STUDY

Based on conversations with a Gridley Planning Commissioner, two Gridley trucking companies and the principal of the McKinley School, a general description of truck circulation patterns in Gridley has been obtained. Information collected on truck movements includes their origins, destinations, routes, frequencies and seasonal traffic levels on Gridley streets.



These conversations revealed that heavy trucks traverse Gridley from all directions, destined for points in all directions both in and outside of town, at all times of year. In particular, the late summer and fall months (late July through late November) bring trucks with fruit for the cannery and grain for the dryer and warehouses. This is the heaviest season of the year for truck traffic, as many as 120 trucks per day (one truck every eight minutes on the average) travels on Sycamore Street. This heavy truck traffic corresponds to the beginning of the school year at three elementary schools which the trucks must pass.

The routes, with their associated origins and destinations, are portrayed in a series of overlay maps (Figure 6). Also shown on the base map are several problem areas or "hot spots" which make for unsafe traffic situations along the existing truck route:

1. Funk's Market at Sycamore and West Biggs-Gridley Road (blind turn for southbound trucks turning west onto Colusa Highway).
2. Sycamore School (noise, safety of children).
3. McKinley School (noise, safety of children).
4. Post Office at Virginia and Sycamore (double parking, congestion).
5. Wilson School (noise, safety of children)
6. Hospital on Spruce (noise).
7. Sycamore-Highway 99 intersection (no traffic control for northbound trucks on Highway 99 turning left onto Sycamore).

These trouble spots exist because trucks must presently go through the heart of town to get to and from the cannery and warehouses and to get across town to Highway 99 from north and west of town. The pros and cons of using the present truck routes (Sycamore and the section of Magnolia between Jackson and Highway 99) appear to be perceived as follows:

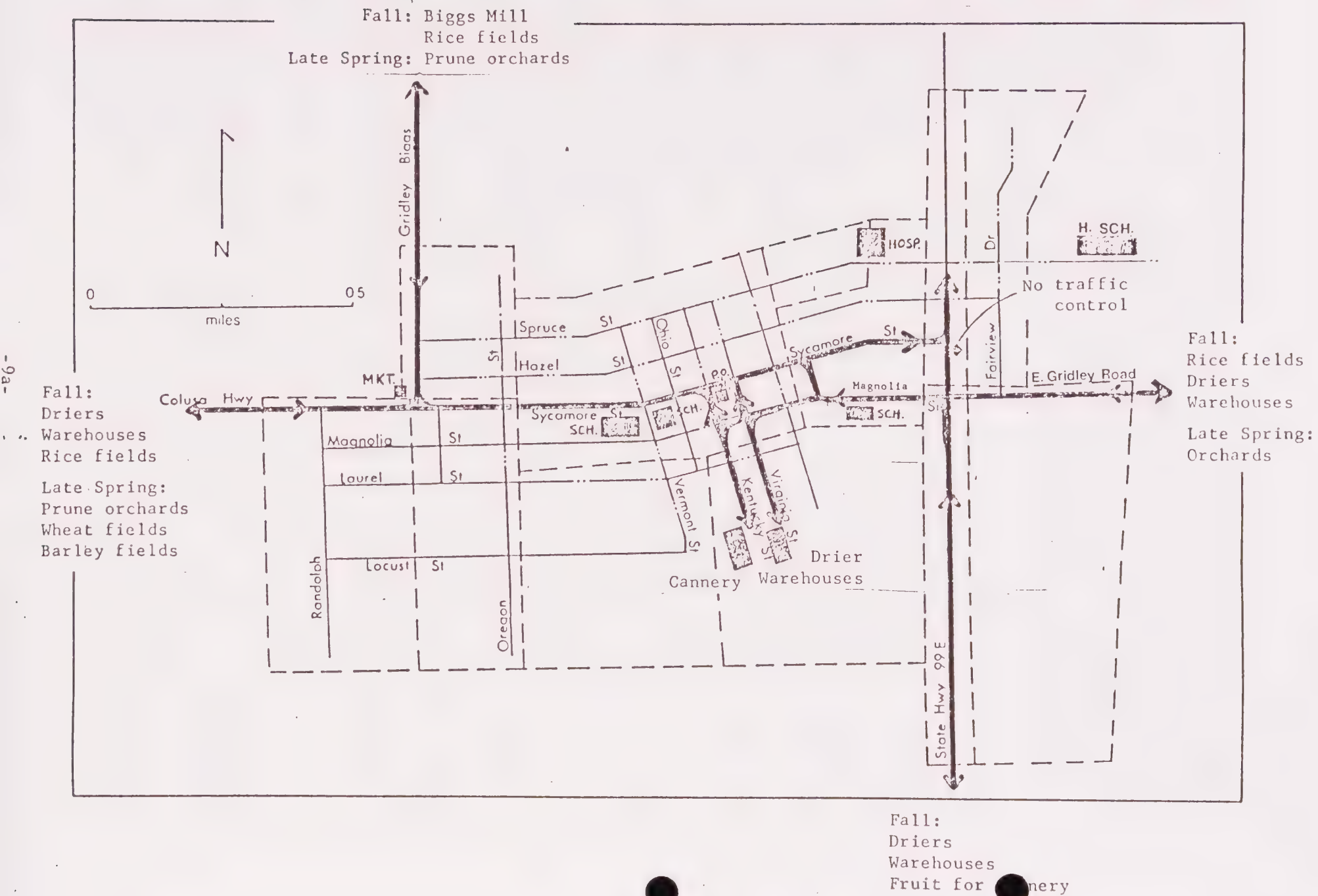
#### PROS

1. Sycamore is most direct, "straight-shot" route through town, involving fewest turns. Other routes would involve more turns, stops and railroad crossings.
2. Sycamore is an existing route, and continuing to use it would involve the least expense.
3. Sycamore is the route truckers have become accustomed to.

#### CONS

1. The Sycamore route results in high exposure of school children to noise which disrupts their classes, to fumes, and to potential accidents when walking to and from the three schools.

FIGURE 6. EXISTING TRUCK ROUTES





2. Trucks must pass and make turns at the Sycamore and Virginia intersection to get to the cannery, which exposes the truck traffic to heavy congestion at the Post Office on that corner, and exposes Post Office users to potential truck accidents.

3. There is no traffic control at Sycamore and Highway 99 so trucks use Magnolia and pass Wilson School.

4. Sycamore is not a wide street, is heavily travelled and is lined by residences along much of its length, exposing residents to noise, fumes and danger of accident.

### Possible Alternate Through Truck Routes

The following combination of route options is proposed to avoid the problems posed by the present Sycamore Street route, routing through traffic away from the heart of town and moving trucks more freely to their destinations, both within town and to points beyond.

The recommended improvements are intended to be implemented as early as is feasible; however, it is recognized that high capital costs are involved. Therefore, the recommendations in this Element represent part of an overall capital improvements plan indicating improvements to be made over a period of several years.

Until necessary improvements can be made, Sycamore Street will continue to be used as the main through truck route, recognizing that hazards are involved and that an alternate route or combination of routes be developed as soon as is feasible. It should be noted that the Gridley Union School District objects to the continuation of truck traffic on Sycamore Street; however, Gridley-based truckers do not see a feasible alternative route until the recommended major improvements have been accomplished.

The following improvements will alleviate the problem of truck traffic through the center of town (listed in order of greatest impact upon the problem):

1. Extend Obermeyer westward to meet a southeastward extension of Washington (shown on Figure 5) so trucks northbound on Highway 99 could have access to cannery area from south of town rather than going through town. Trucks would cross tracks at Laurel, and turn south onto Kentucky or Virginia. The railroad crossing grade at Laurel would have to be reshaped to accommodate trucks.

2. Upgrade Block Road and Little Avenue (including an extension of Little Avenue to the Washington Street-Obermeyer Avenue intersection recommended in Item #1) for truck access to the cannery/warehouse area from the south. Trucks southbound on West Biggs-Gridley Road or eastbound on Colusa Highway would

travel south on Block Road, east on Little, and then north on Washington, west on Laurel and south on Kentucky and Virginia.

3. Convert Washington Street into a N-S through street by placing stop signs at all side (E-W) streets. This enables trucks to have free access to the cannery area from the north, providing truckers coming south from Biggs the option of using Spruce Street instead of skirting the City to use Block and Little. Eastbound trucks on Spruce would turn south on Washington, west on Laurel and then south on Kentucky or Virginia. A sign could be posted on Virginia Street just south of its intersection with Spruce to prevent truckers from turning south onto Virginia to get to the cannery or warehouse. Signs on Spruce Street would post it as an alternate truck route.

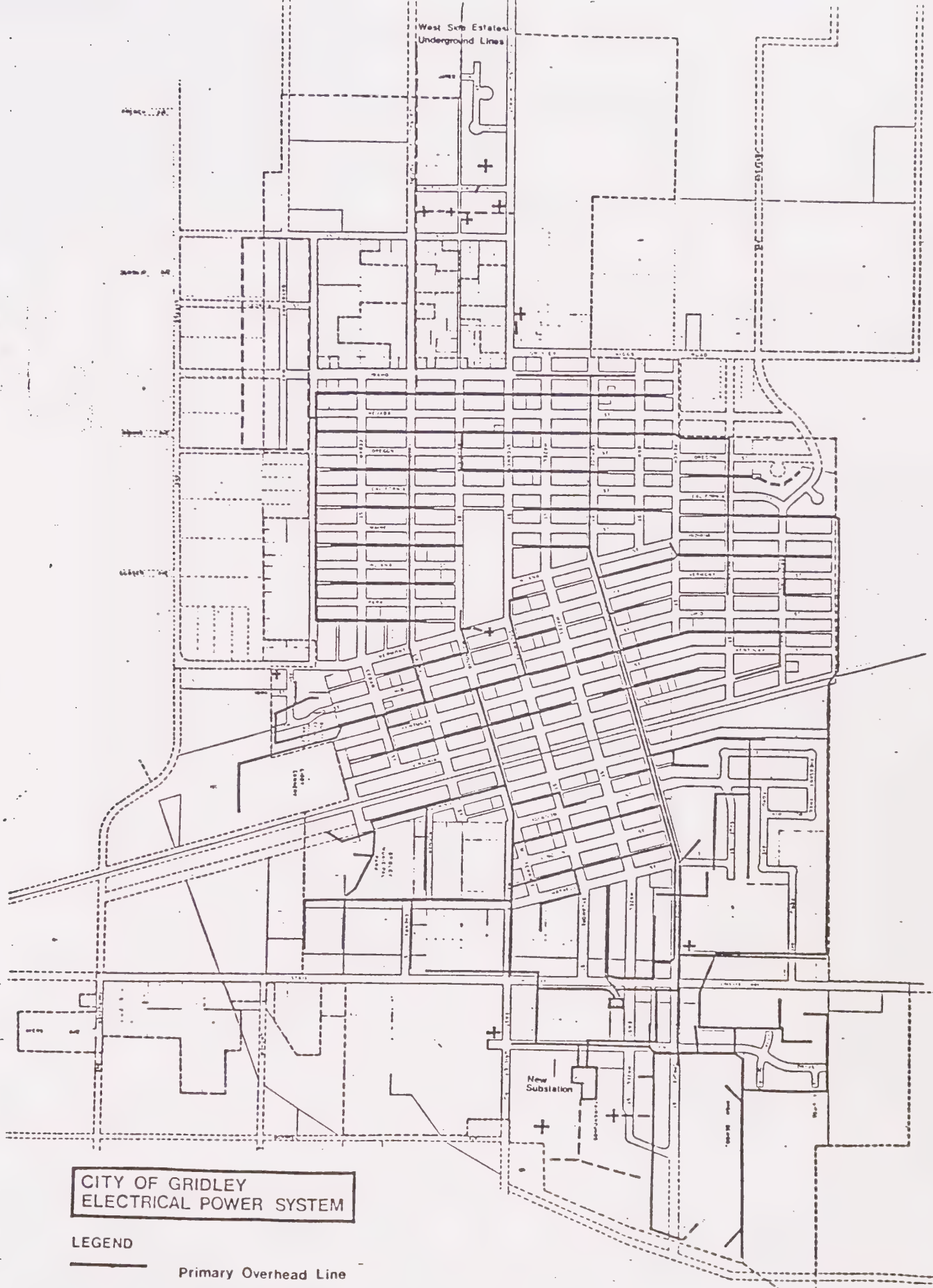
4. When Items #1, 2 and 3 have been accomplished, eliminate truck traffic on Sycamore Street east of West Biggs-Gridley Road and on Magnolia Street west of Highway 99. Use appropriate signing on Sycamore Street to limit truck traffic using Sycamore to delivery trucks (for downtown businesses, the Post Office, etc.) only.

5. Signalize the Washington-Sycamore and Washington-Spruce intersections at such time as traffic volumes warrant. Construct a right turn lane at the Washington-Spruce intersection for vehicle storage to prevent traffic from backing up across the railroad tracks at stop lights. When traffic volumes warrant, investigate the feasibility of synchronizing stop lights along Washington at the Washington-Sycamore and Washington-Spruce intersections to clear the railroad tracks of traffic before each train crossing.

6. Continue using crossing guards at the Sycamore Street crossing for the Sycamore and McKinley Schools.

7. At the intersection of Colusa Highway and West Biggs-Gridley Road, curve the northwest corner and make necessary road improvements (e.g., turn lanes) to improve safety of trucks southbound on West Biggs-Gridley Road turning west onto Colusa Highway. Explore the feasibility of restricting parking on the south and east of Funk's Market on the northwest corner of Colusa Highway and West Biggs-Gridley Road, and of relocating the market's entrance to the north side of the building. If these measures are not feasible, remove or relocate the building.









West Side Estates  
Underground Lines

**CITY OF GRIDLEY  
ELECTRICAL POWER SYSTEM**

**LEGEND**

-  Primary Overhead Line
-  Primary Underground Line
-  Transclosure Housing
-  Substation



GRAND AVE

HOUMA AVE

LOUISIANA AVE

IOWA

MISSISSIPPI

LOUISIANA

MISSISSIPPI

LOUISIANA

MISSISSIPPI

LOUISIANA

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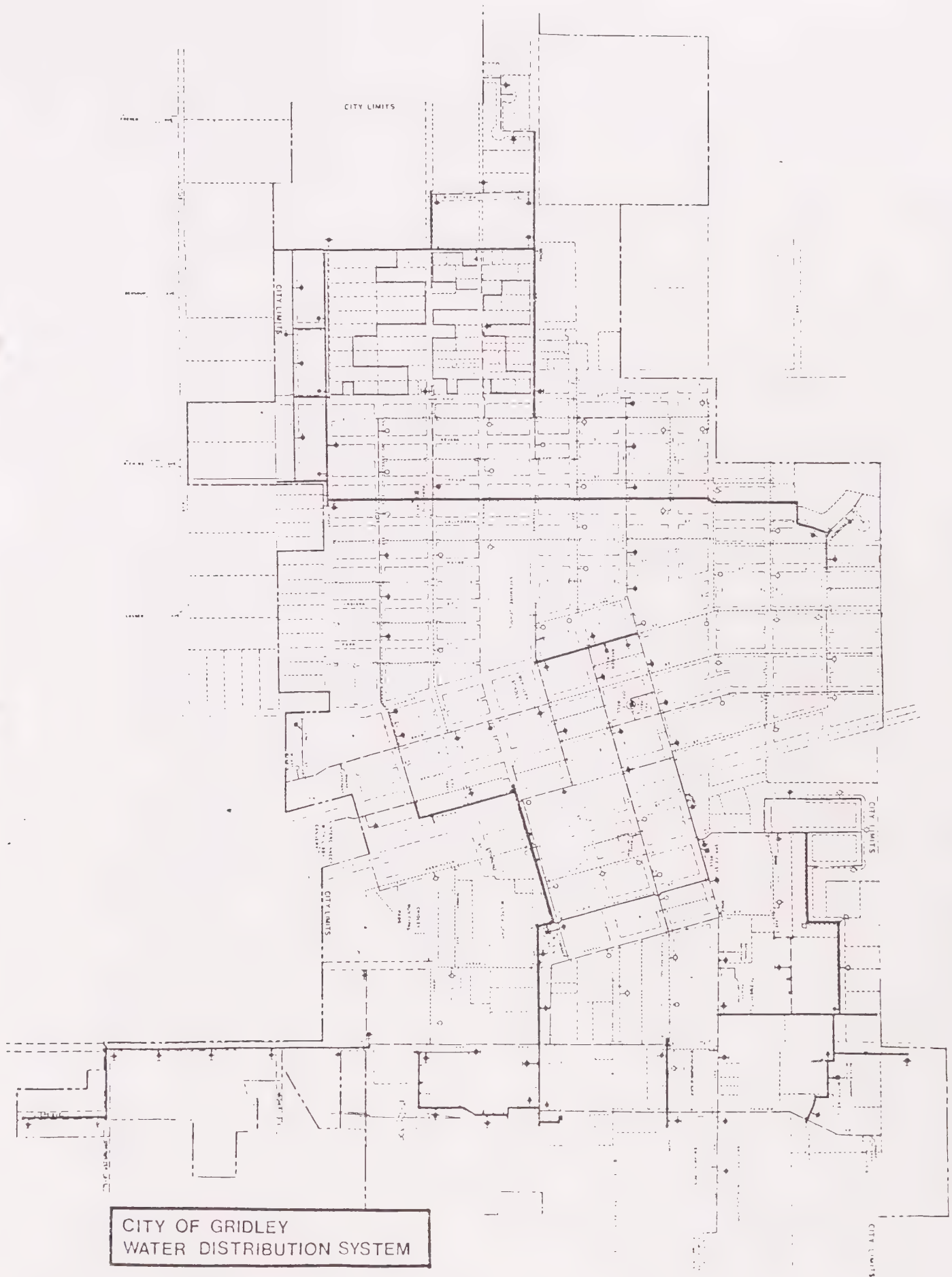
MISSISSIPPI

LOUISIANA

CITY OF GRIDLEY  
STORM DRAIN SYSTEM







LEGEND

WATER MAINS

24" ———  
36" ———  
48" ———  
60" ———  
72" ———

HYDRANT

○ 1.25" NOZZLE  
○ 2.25" NOZZLE  
● 3" NOZZLE  
◆ 4" NOZZLE

MISCELLANEOUS

— END CAP  
— WATER GATE VALVE  
■ WELL  
○ ELEVATED TANK STORAGE  
▲ ABUTMENT



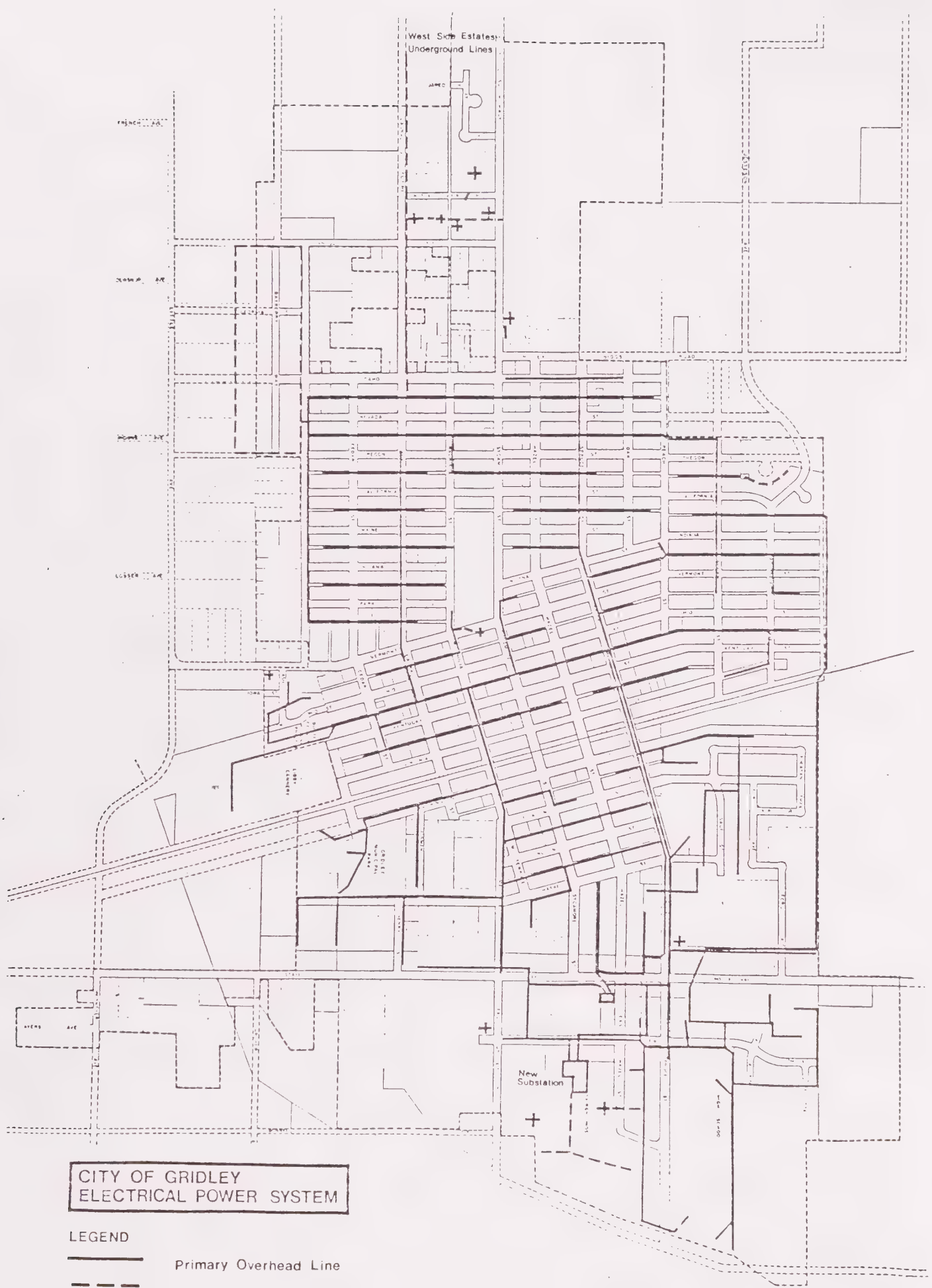


CITY OF GRIDLEY  
SEWER SYSTEM MAP













# CITY OF GRIDLEY ELECTRICAL POWER SYSTEM

## LEGEND

-  Primary Overhead Line
-  Primary Underground Line
-  Transclosure Housing
-  Substation







CIRCULATION ELEMENT  
OF THE GENERAL PLAN  
CITY OF GRIDLEY

SUPPORT DOCUMENT

prepared for  
The City of Gridley

by  
ECUMENE ASSOCIATES

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# GRIDLEY CIRCULATION ELEMENT SUPPORT DOCUMENT

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CIRCULATION ELEMENT  
OF THE GENERAL PLAN  
CITY OF GRIDLEY

I. PURPOSE

The Circulation Element of the Gridley General Plan describes the existing movement of people and goods and seeks to provide for future conditions. The automobile, rail, bicycle, and pedestrian circulation systems treated are interdependent; planning for them is related to all other Gridley General Plan Elements.

It is the purpose of this Circulation Element to suggest ways to maximize the resources of the circulation system by responding to the development consequences of General Plan and zoning decisions. Hence, flexibility is built into statements concerning future conditions to provide a means for a continuing balance between the placement and movement of people and goods.

II. GOALS

Goal 1 - To coordinate elements of the city circulation system with county, state and federal transportation systems.

Policies:

- 1) Gridley supports the use of available funding through county, state and federal sources to finance regional transportation improvements.
- 2) To accommodate projected growth within Gridley on State Highway 99, plans for residential and industrial growth in Gridley will be coordinated with CalTrans planning staff.
- 3) Advance planning should consider widening the entire length of State Highway 99 to four lanes.

Goal 2 - To minimize circulation and transportation costs to the City while providing reasonable access to and from the City as well as to facilitate efficient internal movement.



Policies:

- 1) Development should not be permitted that will significantly increase traffic congestion, unless mitigating measures can be provided.
- 2) New development shall pay the cost of improvements necessary to maintain adequate service levels in areas affected by said development.
- 3) The existing arterial street system within Gridley will be preserved and maintained.
- 4) Circulation within the City will be facilitated by improving the capacity of existing arterials and, if needed, by the designation of new routes.
- 5) Unless off-site circulation facilities are financed by the developer, residential development will be channelled toward committed circulation and growth patterns so as to avoid substantial public investment in new collector streets or major arterials.
- 6) The structural adequacy, design and alignment of Little Avenue, East Gridley Highway and State Highway 99 north of Magnolia will be studied and evaluated, preferably at the time of a development proposal for abutting lands. The major portion of the costs for both the study and improvements would be borne by the land developer(s).

Goal 3 - To provide a circulation system in and adjoining commercial areas which promotes safety and minimizes traffic congestion.

Policies:

- 1) Ingress and egress to shopping centers will be carefully designed with special emphasis toward promoting traffic safety. Left-hand turning movements into and out of commercial areas should be minimized, especially near intersections and where turning lanes are not present.
- 2) Prior to additions to commercial areas, the City Council will be satisfied that all applicable traffic engineering principles are considered and utilized to the fullest extent possible.

- 3) In no case should commercial development substantially increase traffic on the existing street system unless there is an implementable program to properly mitigate such traffic impacts.
- 4) Commercial strip development with its accompanying traffic congestion and cross traffic must be carefully analyzed for traffic safety and ease of traffic flow. Limited (shared) access configurations should be explored where possible.

Goal 4 - To provide a safe and practical circulation system.

Policies:

- 1) Sidewalks, paths and appropriate crosswalks should be located close to all schools and along all principal streets leading to schools and other areas with significant pedestrian traffic.
- 2) All street intersections shall be designed and maintained to assure adequate sight distance to and from approaching vehicles.
- 3) Private recreational and accessory vehicles should be parked off the public right-of-way and out of the front building setback in order to promote traffic safety and good visibility.
- 4) There should be emphasis on making streets safer for all users, including bicyclists, and pedestrians, through the use of all possible and practicable engineering improvements short of signalization.
- 5) A high level of traffic rules enforcement should be maintained in order to reduce injury to persons and damage to property.
- 6) Traffic from major new residential development should not be routed through residential neighborhoods. At least two access routes should be provided, and at least one of those should be through other than a residential neighborhood.



- 7) All new subdivision roads shall conform to City standards and be reviewed by City staff for road widths, vertical and horizontal curves, and sustained grades.
- 8) Alternate emergency access roads shall generally be required in developments greater than 40 units and shall be reviewed by the Fire Department.
- 9) New street names should not duplicate those street names already in use in the Gridley area.
- 10) Consistent with good traffic engineering practices, on-street parking in bike lanes shall be prohibited.
- 11) Private streets may be permitted when they are deemed to be in the public interest, constructed consistent with City street standards, and their maintenance is guaranteed.

Goal 5 - To provide circulation throughout the City so that it is the least disruptive to existing residential areas while assuring that all of the City has a level of access consistent with the need for public safety and general welfare.

Policies:

- 1) Access to developing subdivisions should not significantly alter the environment along existing collector streets.

Goal 6 - To provide a circulation system that utilizes a broad range of transportation modes.

Policies:

- 1) Alternate modes of transportation, including bus, bicycle and walking, should be encouraged to reduce demands upon the street system.
- 2) Bike lanes and walkways should be fully developed in order to broaden transportation options.
- 3) Adequate space for bus maneuvering, stopping and parking space shall be considered in conjunction with improvements to City roads with construction of roads.

Goal 7 - To provide convenient parking spaces in the downtown area that are available and accessible to shoppers, employees and others as they are needed.

Policies:

- 1) A parking inventory will be conducted as needed in order to determine problem areas of parking demand.
- 2) Bicycle and pedestrian access to the downtown will be encouraged by providing bicycle racks and by insuring that all sidewalks and pedestrian routes are convenient and safe.
- 3) Work to increase the availability of off-street parking within and adjacent to downtown business.
- 4) Consider acquiring vacant properties or deteriorated buildings and use the property in appropriate locations for public parking facilities.

III. EXISTING CONDITIONS AND METHOD OF ANALYSIS

A. The Road System

The road system is functionally divided into arterial, collector, and local streets (Figure 9). Arterials link the major areas within the community with each other and carry traffic from the collector streets to the highways. Collectors carry traffic from minor streets in residential areas and carry local traffic to shopping centers, schools, arterials and highways. Local streets are minor streets connecting individual properties to the rest of the road network. Most of Gridley streets are of this type.

The major transportation corridors are State Highway 99 and the Southern Pacific Railroad. They extend north-south for slightly over one mile through the eastern and central portions of the city, respectively.

There is no freeway providing direct access to Gridley. State Highway 99 carries approximately 10,200 vehicles per day, drawing 60 percent of automobile and truck traffic from local and collector streets. This major arterial has been widened to four lanes with a continuous left turn lane between West Liberty Road and Magnolia Street. North of Magnolia Street the arterial narrows to less than 80 feet due to the placement of buildings along the highway. The city's policy is to adopt a 90-foot right-of-way width for State Highway 99. This policy is



consistent with the California Department of Transportation's (CALTRANS) recommendations. (See letter from W. R. Green, District Director, in appendix.) The 90-foot right-of-way would provide for four 12-foot traffic lanes, a two-way left turn center lane, two shoulder/parking lanes, curb, gutter and sidewalk and one-foot sign easement.

Other arterials significant to movement in and out of the city are the Colusa, Gridley-Biggs, And east Gridley Highways. These are two-lane roads with 45-55 mph speed limits. The East Gridley Highway intersects State Highway 99 at Magnolia Street. The Colusa Highway and West Biggs-Gridley Road intersect at right angles in the northwest portion of the city and feed into Sycamore Street, which terminates at State Highway 99.

Spruce Street is designated an east-west arterial, reducing east-west traffic on Sycamore Street which passes two schools. Sycamore Street is expected to remain a collector. The other two east-west collectors are Ord Ranch Road to the north, and Little Avenue to the south. North-south collectors are Block Road, Randolph Avenue, Oregon Street, Vermont Street and Washington Street. While not classified as a collector, Magnolia Street (one block south of Sycamore) provides major truck access to the cannery via Virginia Street. All other streets in Gridley's circulation system are shown as local streets, of lesser importance than collectors in volume of traffic and design capacity.

## RIGHT-OF-WIDTHS

### BY STREET CLASSIFICATION

State Highway 99	90 feet
Arterial or Major Collector (4 lanes)	84 feet
Minor Collector or Local Street (2 lanes)	60 feet
Substandard Streets (listed in Circulation Element, Summary Document, page 3 (3) Local Street System)	To be determined by the Planning Commission/City Council

### B. The Transit System

The Southern Pacific Railroad bisects the city, running north-south between and parallel to Virginia and Washington Streets. Eight trains pass through the city in a 24-hour period, providing direct movement of goods to and from the Libby Cannery. Railroad crossings are at grade through the city.

The Gridley Golden Feather Flyer is a dial-a-ride bus service for the elderly and handicapped in Gridley and the surrounding area. The service is available seven days a week, 24

hours a day. The Intercity Transit System provides three buses and one backup bus per day between Biggs, Gridley, Palermo, Oroville, Durham, Chico and Paradise. The system is a cooperative effort between the County and the participating cities, designed to connect the major populated areas of Butte County. Three buses on three routes operate eleven hours each weekday. To supplement the intercity system, Greyhound issues tickets subsidized by the system. The Greyhound Bus depot is located in Gridley at Spruce and Ohio Streets.

#### C. Pedestrian and Bicycle System

The city has no provision for separate marked bicycle lanes on its roadways. There is sufficient right-of-way to allow for a safe, continuous bicycle lane on arterials such as Sycamore and Spruce, and collectors such as Hazel, Magnolia, Virginia and Washington. Local, less heavily traveled streets such as Cedar, Laurel and Ohio likewise provide a reasonably safe bicycling environment. However, parked cars along local streets can jeopardize safety by reducing the bicyclists' visual field and forcing encroachment of bicyclists into the automobile traffic lanes.

Pedestrian movement is provided for by crosswalks at street intersections and by sidewalks along most of the city's streets. Signalized intersections at State Highway 99 at Magnolia, Hazel and Spruce all have pedestrian-activated crossing buttons.

#### D. Parking in the Downtown Area

For purposes of a parking inventory, "downtown" area was defined as that area encompassed by Spruce Street on the north, Jackson Street on the east, and Sycamore Street and Vermont Streets on the south and west, respectively. Currently no offstreet public or private parking is available in the core downtown area. The total number of street parking spaces within this area is 449. The parking lot at Washington Street and Sycamore Street has a total of 62 parking spaces but it is a private lot.

Downtown parking conditions are favorable throughout the day, except for the heavily used areas on Hazel between Kentucky and Virginia and on Virginia between Hazel and Sycamore. Observation of weekday parking availability showed 12:00 noon to 2 P.M. and 4 to 5 P.M. as the heaviest occupancy periods for downtown parking. During these periods there is a maximum estimated 60 percent occupancy, meaning that there are several available spaces in a small area, and parking is generally available within one block (or less) of where the driver prefers to park (nearest the business destination).

These parking areas serve small businesses in the downtown. Due to the general ease of parking, there is understandably a high expectation of parking availability

# Total Parking Spaces

449 Total Street Spaces

62 Holiday Parking Lot

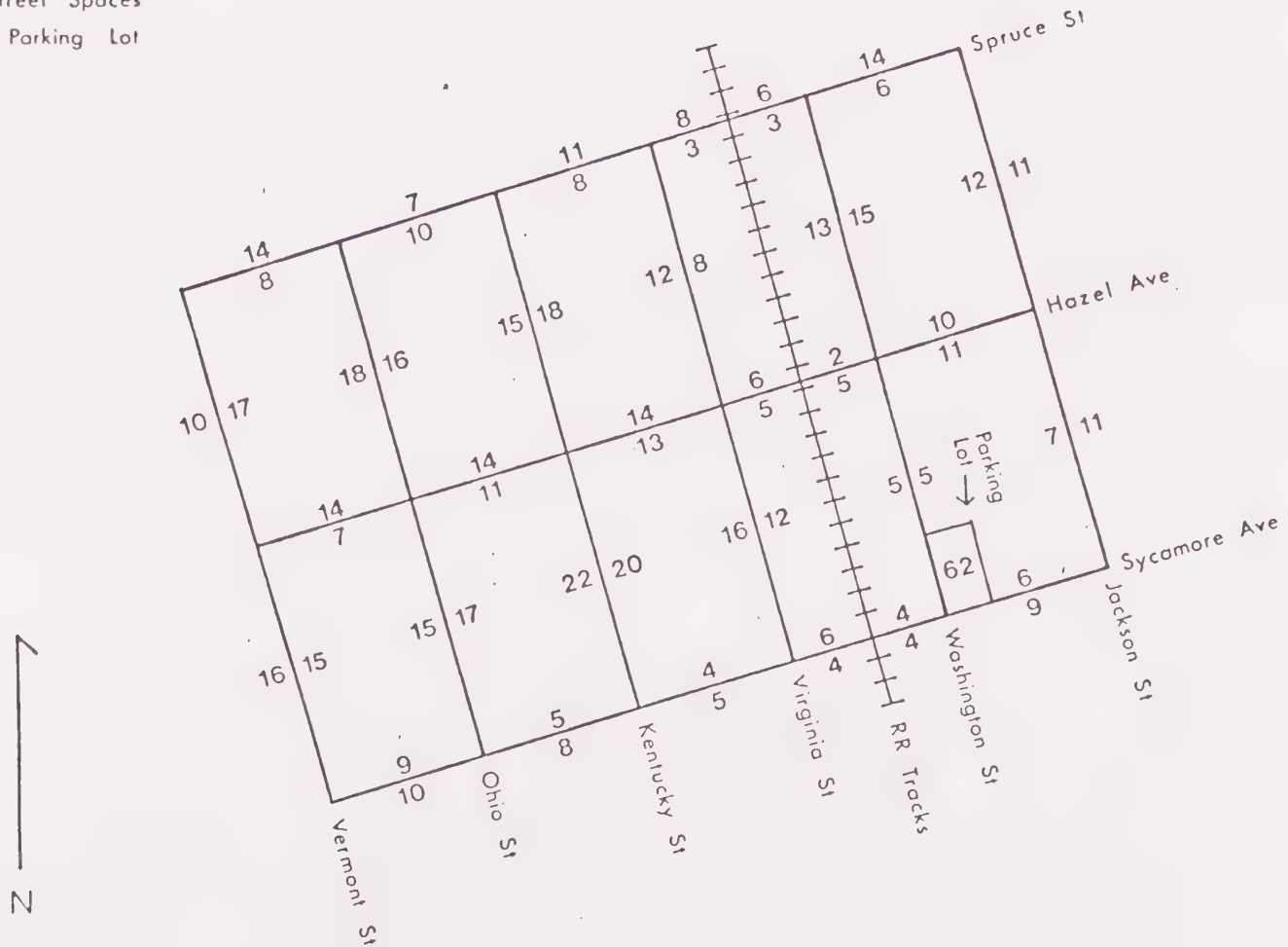


Figure 2: Downtown Parking Diagram



directly in front of or very close to the business destination. If parking requires a walk of more than one block, a parking shortage may be perceived, although no parking shortfall exists. However, with revitalization of the downtown businesses, and general growth in the area, this may become a problem.

#### E. Method of Analysis

The dimensions, design and signalization of streets and intersections determine their ultimate capacity. Every approach to an intersection can only accommodate a certain maximum number of vehicles before traffic flows become unacceptably slow and congestion occurs. Roadway design and traffic control devices must be monitored and occasionally adjusted in anticipation of changes in traffic patterns and volumes.

Whenever possible, changes to roadways should be planned and implemented prior to the time that an intersection approach reaches capacity. "Capacity" is the maximum number of vehicles possible given a roadway's particular geometry, traffic conditions and controls. It is desirable that every approach to each intersection operate at stable conditions (vehicles occasionally wait through more than one red light) or free-flowing conditions (no vehicle waits longer than one red light). Once a roadway has reached its design volume, substantial approach delays are likely.

Intersection approaches are generally the limiting factor for capacity of roadways. The term "level of service" is used to describe the traffic flow condition of roadway links or intersections; these levels are categorized to reflect degrees of driver satisfaction. When an approach to an intersection is functioning at an acceptable level (traffic is flowing freely or is stable), the level of service is expressed as A or B. Level of service C is a stressed but generally acceptable level. If traffic flow on approaches to intersections is deteriorating, level of service is expressed as D, E, or F, indicating that modifications to the street are needed to improve traffic flow (see Table 1, Level of Service Table).

To determine present level of service in Gridley, traffic counts were taken to identify the most heavily traveled approaches to all intersections. Most intersections in Gridley are nonsignalized, with minor street yield signs (no stop signs), two-way or four-way stops. Two-way stops control the majority of nonsignalized intersections.

##### 1. Signalized Intersections

For the signalized intersections, opposing motions were studied: left turns and through motions for north-south and east-west travelling traffic were counted during morning, noon and afternoon peak hours. The most critical leg of each intersection was identified. Level of service criteria were used

TABLE 1

## SUMMARY OF LEVELS OF SERVICE FOR INTERSECTIONS

Level of Service	Type of Flow	Delay	Maneuverability
A	Free flow	No vehicle waits longer than one red indication.	Turning movements are easily made, and nearly all drivers find freedom of operation.
B	Stable flow	The number of vehicles waiting through one red indication is increased.	Many drivers begin to feel somewhat restricted within groups of vehicles.
C (Design Level)	Stable flow	Occasionally vehicles may have to wait through more than one red indication.	Backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	Approaching unstable flow	Delays may be substantial during short periods, but excessive backups do not occur.	Maneuverability is severely limited during short periods due to temporary backups.
E (Capacity)	Unstable flow	Delay may be great--up to several signal cycles.	There are typically long queues of vehicles waiting upstream of the intersection.
F	Forced flow	Excessive delay.	Jammed conditions. Backups from other locations may restrict or prevent movement of vehicles at the intersection under consideration.

Source: Highway Capacity Manual, 1965.

to define conditions for each intersection approach.

## 2. Nonsignalized Intersections

For nonsignalized intersections queueing theory was used. At four-way stops all approaches operate equally. Vehicle(s) may cross the intersection from alternating directions (E/W vs. N/S) at minimum intervals of five to seven seconds. The level of service determination is simply based on peak hour counts. For two-way stops and intersections without stop signs, capacity determination requires analysis of several variables: For each intersection, through motions, left and right turns are examined. The "critical gap," or the time required for a movement to be negotiated, is established. Left turns through an intersection from a minor street onto a through street are the most time consuming turns to complete at a two-way stop or nonsigned intersection. Because of the difficulty in completing this motion, the critical gap is longest and the approach capacity is lowest in terms of the hourly volume of traffic it is able to handle.

In every case, capacity is determined by examining roadway design and critical gaps for each approach. The left turn motion that is handling the greatest volume of traffic during a one-hour period will result in the lowest level of service recorded. This is the case for the left turn motion from Virginia onto Sycamore.

At many intersections in Gridley there is room for unshared right turn motions, and right-turning traffic flows freely. However, there are few unshared left turn motions (separate left turn lanes) that serve to implement traffic flow. Therefore, left turns at two-way and nonsigned intersections determine capacity over most of the city.

Most Gridley streets are presently operating with free-flowing, optimum traffic conditions (level of service A). The intersection of Sycamore and Virginia has the only approach in the city operating at level of service B. Approaches at Vermont and Sycamore, and Washington and Sycamore are operating at level of service A/B.

## IV. FUTURE CONDITIONS

In order to anticipate problems and predict future circulation needs in Gridley, estimates of future residential, commercial and industrial growth in the city must be made. Planned growth in Gridley has been detailed in three reports written for the city concerning proposed rezoning. Figure 3 shows planned and predicted growth areas.

Trip generation for future development in the City of Gridley was estimated from data in several environmental impact reports and from overall growth trends in the mid-Sacramento



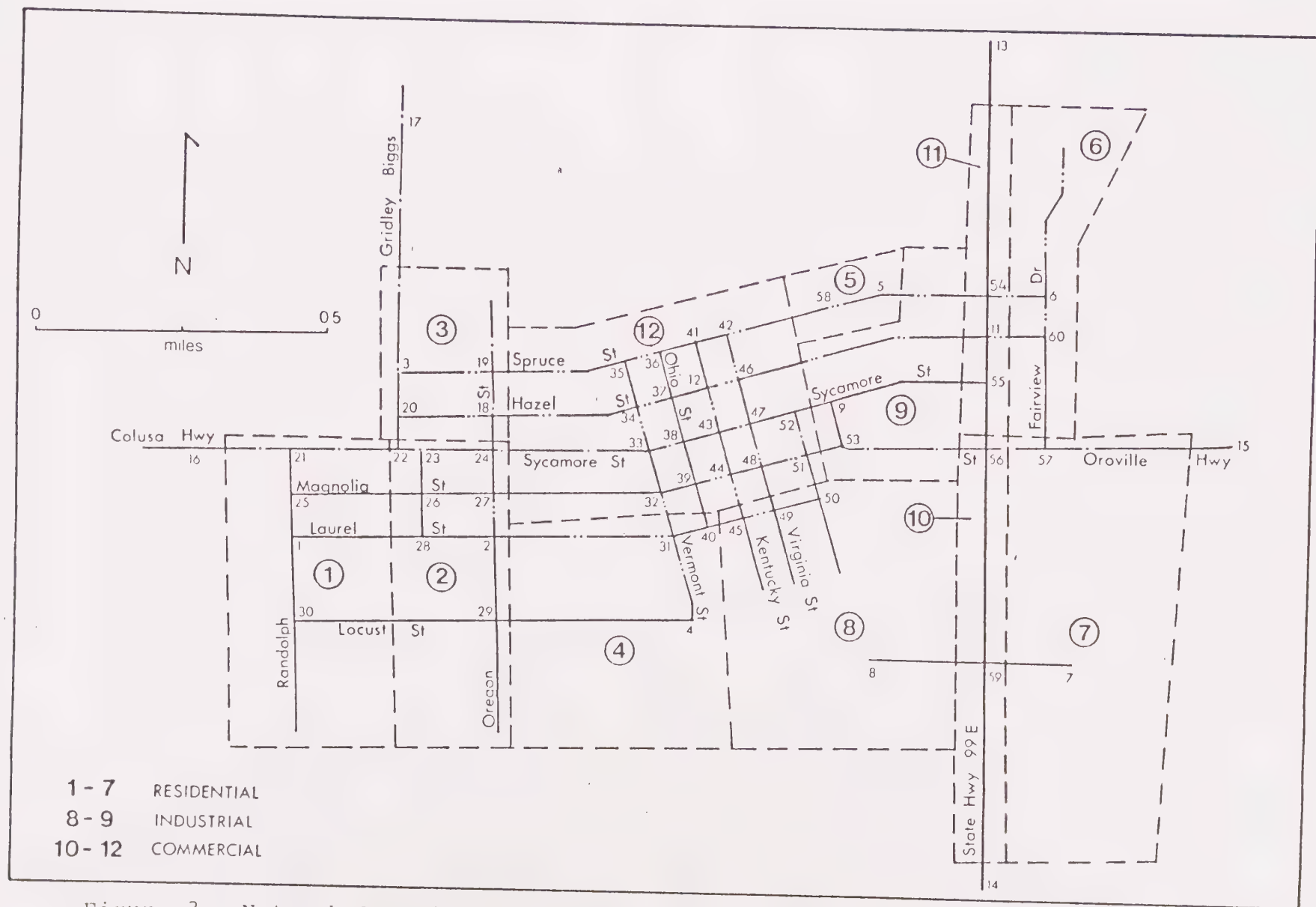


Figure 3: Network Capacity Diagram Designating Residential, Industrial and Commercial Growth Sectors

TABLE 2

Projected Trips: Ingress and Egress  
for Residential, Industrial and Commercial  
Growth Areas

<u>Residential Sectors</u>	<u>Percent Ingress</u>	<u>Percent Egress</u>
Sector 1	69	23
2	64	22
3	139	46
4	120	40
5	122	41
6	103	34
7	314	105
<u>Industrial Sectors</u>		
8	305	916
9	65	196
<u>Commercial Sectors</u>		
10	450	400
11	450	400
12	150	150

Assumption: For 4:30-5:30 peak hour trips, the ratio of ingress to egress is as follows:

	<u>Percent Ingress</u>	<u>Percent Egress</u>
Residential	75%	23%
Industrial	25%	75%
Commercial	50%	50%

## Sources:

- 1) Draft EIR for the Industrial Zoning Districts of Gridley, California, December, 1979.
- 2) Draft EIR for the Commercial Zoning Districts of Gridley, California, September, 1978.
- 3) Draft EIR for the Residential Zoning Districts of Gridley, California, March, 1979.
- 4) CalTrans Trip Generation Manual
- 5) Estimates of Commercial Acreage

Valley. For purposes of assigning trip beginnings and ends the city was divided into twelve zones. Each zone represented an area for potential new growth and development of an established residential, commercial or industrial area. Table 2 lists projected traffic volumes at ultimate buildout of residential, commercial and industrial sectors, as well as estimates of total trip generation for each sector. Using a computer network traffic simulation model new trips were assigned to local streets based on their probable origins and destinations. Streets included in the network analysis were: State Highway 99, Magnolia/East-Gridley Highway, Sycamore, Hazel, Spruce, Fairview Drive, Virginia, Washington, Kentucky, Ohio, Vermont, Gridley-Biggs Road, Oregon, Laurel, Randolph and Jackson.

The computer assigned maximum design traffic volumes on roadways for each approach to each intersection. Where necessary, traffic was routed along new paths when absolute capacities were exceeded. Whenever a particular street segment showed levels approaching a critical level (approaching maximum design capacity), travelling times were increased to reflect conditions under increased congestion. With each reevaluation in travel time, traffic was redistributed along minimum distance routes. Then each link and intersection affected was evaluated for potential impact as reflected in increased haul times or reductions in levels of service. Figure 4 shows future levels of service for intersection approaches at level C or worse.

Areas identified as having potential for future traffic congestion problems are: Highway 99, Jackson Street, Magnolia Street, and Washington Street. (Refer to Figure 4 for future levels of service diagram.)

Highway 99 south of Hazel will continue to receive large increases in local as well as regional traffic. Most of this increase will be due to new industrial development in the southern portion of the city and to increased density of commercial land uses along the highway. Even with construction of an additional lane sometime in the next 10 years, the highway is expected to operate at level of service E in the northbound direction during afternoon peak traffic hours.

Jackson, Magnolia and Washington Streets will experience increased use and eventual stress as the demand for alternate north-south routes through the city increases. At full development Magnolia at Jackson and Washington will operate at level of service D or below.

The western portion of the city will experience greater than average traffic increases over the next few years.

Suggested changes to alleviate the effects of these growth patterns are listed in the Circulation Element Summary Document.



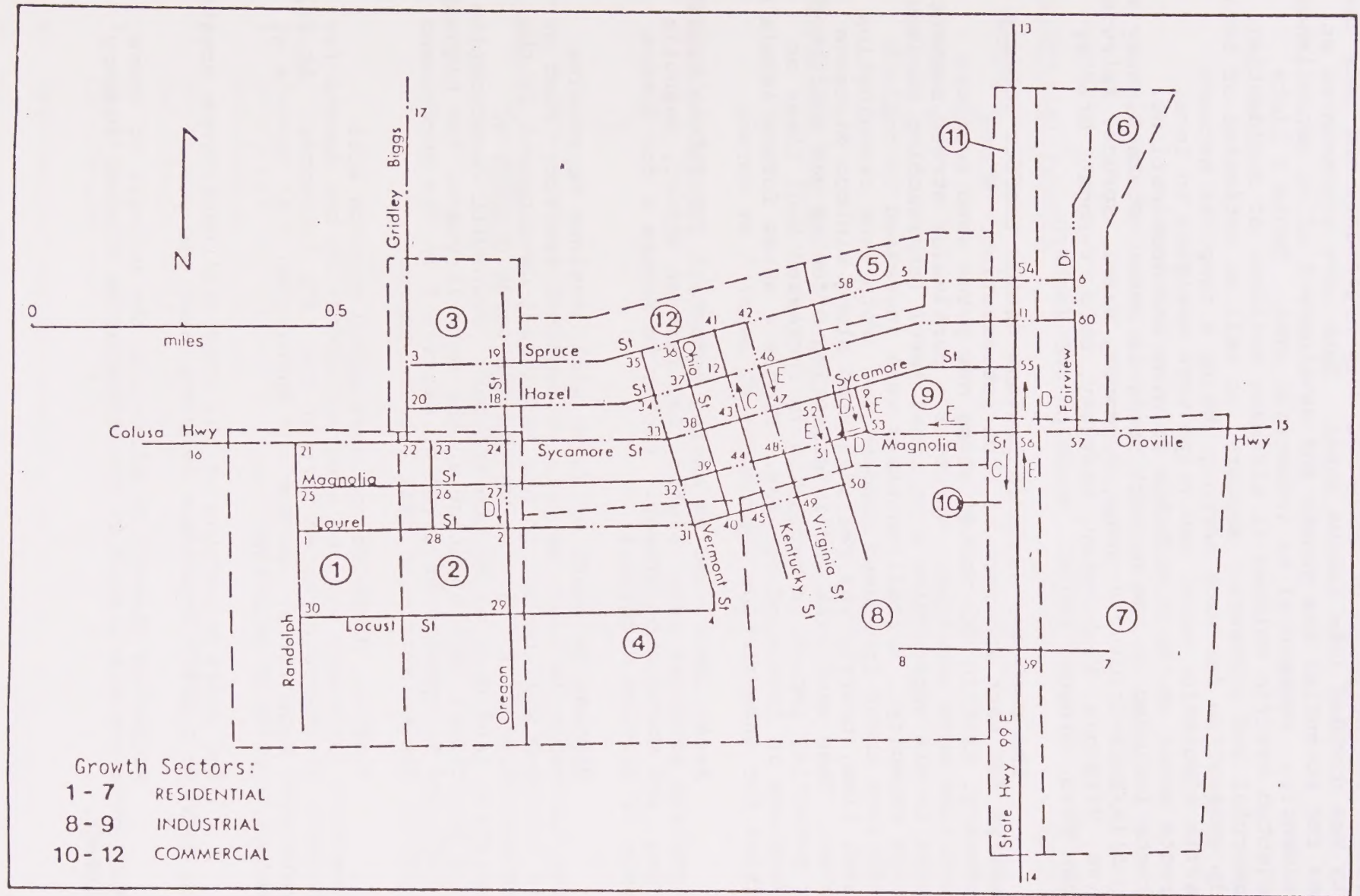


Figure 4. Network Capacity Diagram Showing Future Levels of Service at Intersections (assuming ultimate buildout of all growth sectors)

V. CONFORMANCE WITH OTHER ELEMENTS OF THE GRIDLEY GENERAL PLAN

This update of the Circulation Element of the Gridley General Plan is based on the land use and housing elements of the Gridley General Plan. It especially serves to support an "orderly, functional and compatible land use pattern resulting in the reduction of land use conflicts." Its growth presumptions are based on zoned residential, commercial and industrial growth areas. Extension and improvements to roadways designed to serve planned needs will implement Land Use Goals for residential, commercial, industrial, agricultural and open-space areas.

VI. CONFORMANCE WITH BUTTE COUNTY GENERAL PLAN

The goals and policies set forth in this circulation element conform with all recommendations and goals in the Butte County General Plan. These recommendations are:

- All parts of the circulatory system should be coordinated with city, state, federal and unincorporated areas within the County and adjoining counties.
- All parts of the circulatory system should be scaled to the function they are to perform in conformance with the density and total population of an area and its related land use requirements.
- Circulatory routes should have adequate reserved rights-of-way to accommodate expected, as well as existing, traffic volume.
- The circulatory system should provide balance and integrated facilities for all modes of travel.

The County's Goals area:

1. The provisions of freeways and prime arterials for the primary purpose of moving large volumes of traffic.
2. Freeways designed to harmonize with the landscape which they traverse.
3. Avoidance of bisecting neighborhoods and communities with major highways.
4. Scenic highways in locations that traverse scenic areas.
5. Public transportation where functionally and economically feasible.



6. Beautification of major roads to make them attractive as well as convenient to the resident and visitor.
7. A balance between land uses and transportation facilities.
8. A continuing review of street and highway construction and maintenance standards to maximize the economic life of these public investments.
9. Adequate off-street parking as a part of every intensive use of land.